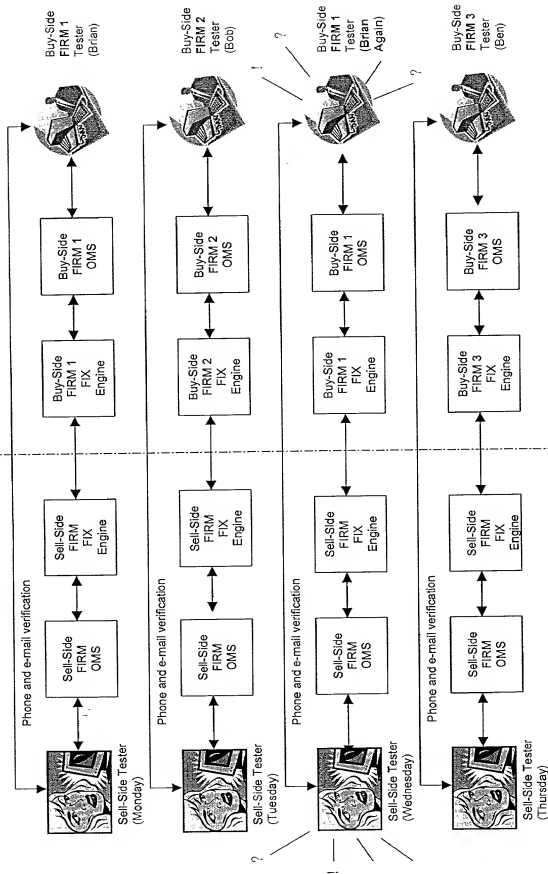


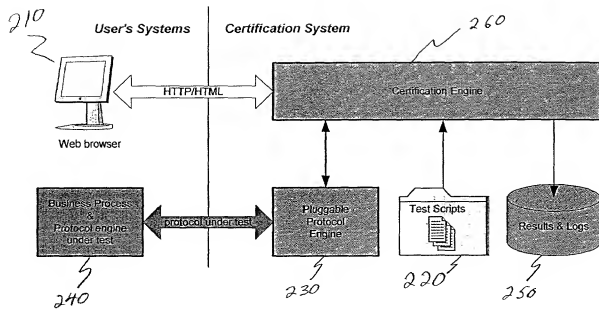
Manual Certification (Prior Art)



Sell-Side FIRM

Buy-Side FIRMS 1 → X

F16, 1



F16.2

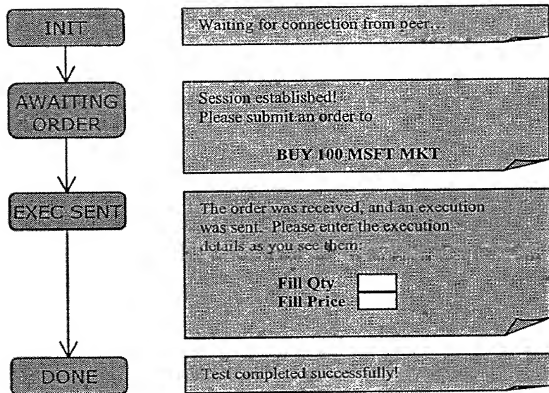


FIG. 2A

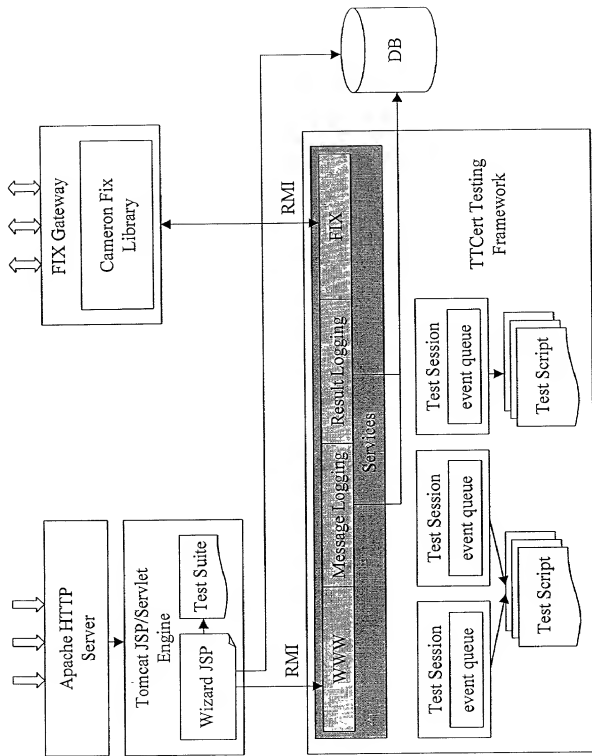
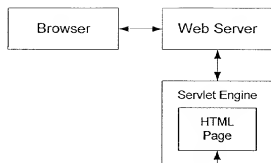
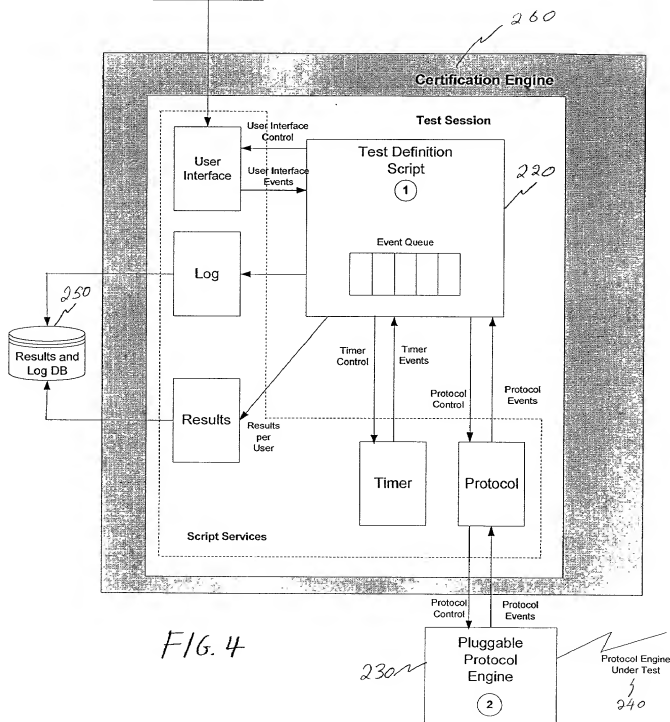


FIG. 3



ttCERT Test Session Overview

- ① Has Accompanying Enlargement
- ② Has Accompanying Enlargement



F16.4

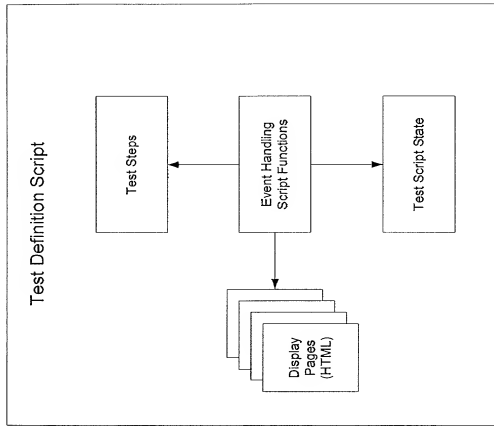
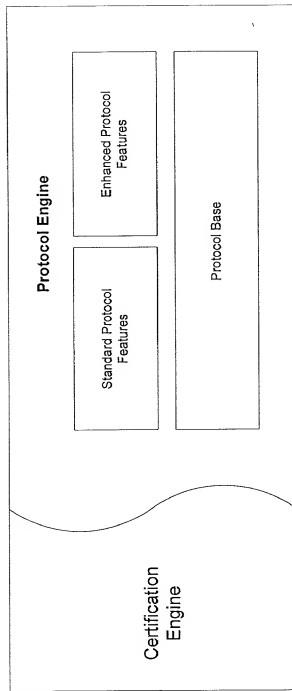


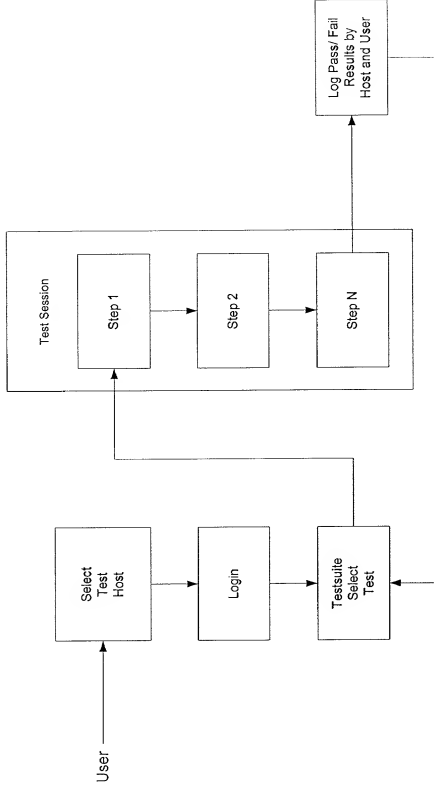
FIG. 5



F16.6

104011-0235660

Testing Workflow



F16.7

1020115225560

850 870



transactiontools, Inc.
Realtime Admin Profile Discussion File Upload

Test Suite: FIX Session/Level Test Cases

Preferences

* Set Preferences
Manage preferences for running the OpenFIX tests
View Logs | [Required] passed

820 870 810


FIX Session-Level Test Cases

- * 1. Initialize or Logout Logout
View Logs | [Required] Not Tested
- * 4. Send Heartbeat Message
View Logs | [Required] failed
- * 5. Receive Heartbeat Message
View Logs | [Required] Not Tested
- * 6. Send Test Request
View Logs | [Required] Not Tested
- * 7. Receive Reject Message
View Logs | [Required] Not Tested
- * 8. Receive Resend Request Message
View Logs | [Required] Not Tested
- * 9. Synchronize Sequence Numbers
View Logs | Not Tested
- * 11. Receive Sequence Reset (Reset)
View Logs | [Required] Not Tested
- * 12. Initialize Logout Process
View Logs | [Required] Not Tested
- * 13. Receive Logout Message
View Logs | [Required] Not Tested
- * 18. Support Third-Party Addressing
View Logs | Not Tested
- * 19. Test Resend Handling
View Logs | Not Tested

Welcome, Transactiontools, Inc.
The list below reflects your current configuration testing status.
Click on any of the incomplete tests to begin.
For assistance, please consult the OpenFIX specification or contact us at sales@transactiontools.com.

2 and 3. Receive Message Standard Header and Trailer

F/16.8

 VNCERT Corporation Fixing India's Servers	
Admin Tools	
Users	910
• Session Manager	920
Tests	930
• Results	940
• Results Summary	950
Scripts	
• Manager Scripts	
• User Profiles	
Licenses	
• Issue/Unit Licenses	

F/G. 9

Active Certification Sessions (as of 14:21:40) [Refresh]

demo

TransactTools, Inc. () [Logout]	
Web Session	
Status:	Logged In
Login Time:	Thu May 17 14:20:35 EDT 2001
Last Activity Time:	Thu May 17 14:21:40 EDT 2001
Time Inactive:	0:0:0
Last Request:	/cert/demo/cert/admin/session.jsp
FIX Certification Test Session [Shutdown] [Reset FIX] [View Log]	
Status:	In Progress
Script:	D:\ (Connect to server)
Start Time:	Thu May 17 14:21:35 EDT 2001
FIX Connection Status:	Not Connected
IP Address:	N/A
Last Sent:	N/A
Last Received:	N/A

F/16.10

102017-925560

POWERED BY CNET



Manage Scripts
Database Admin HTML Editor

Current directory: /

Upload Scripts Download Scripts (Zip File) Remote Directory

Subdirectories 1110 1120 1130

Directory Name
c01s 4 files
c02 2 files

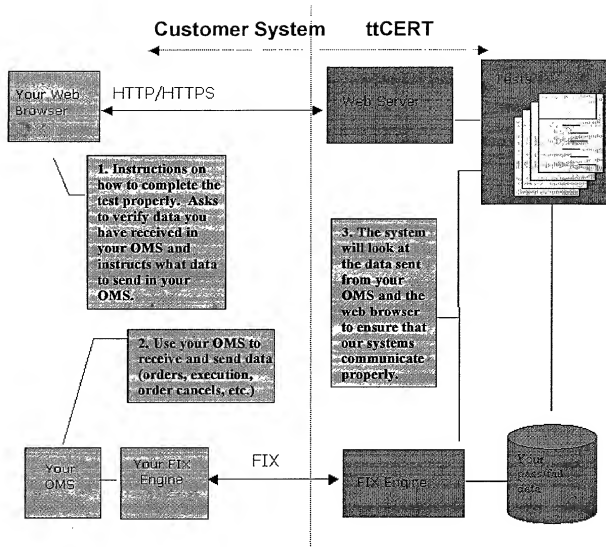
1140

Make Directory

Files


File Name	Last Modified	Size
1.xml	07/24/2001 11:09	4021
10.xml	07/24/2001 11:09	5685
11.xml	07/24/2001 11:09	4871
12.xml	07/24/2001 11:09	4734
13.xml	07/24/2001 11:09	3944
14a.xml	07/24/2001 11:09	3754
14b.xml	07/24/2001 11:09	3709
14c.xml	07/24/2001 11:09	3601
14d.xml	07/24/2001 11:09	3771
14e.xml	07/24/2001 11:09	3646
14f.xml	07/24/2001 11:09	3784
14g.xml	07/24/2001 11:09	3708
14h.xml	07/24/2001 11:09	3750
14i.xml	07/24/2001 11:09	5152
14j.xml	07/24/2001 11:09	5729
14k.xml	07/24/2001 11:09	3732
14l.xml	07/24/2001 11:09	4503
14m.xml	07/24/2001 11:09	4554
14n.xml	07/24/2001 02:07	3731
14o.xml	07/24/2001 01:31	3795

FIG. 11



F/G. 13

102017 525560



ORDERED BY **ZACH**

Zach Imre, Transactools Inc.
View Log About | Discussion | Help | Logout

Order Fill

Steps

Connect to Server
Submit Order
Verify Order Ack
Verify Order
Trade Complete

Send an Order

Please enter and send the following order from your trading application:

Sell 1500 AOL at a limit price of 40

Waiting for order...

2-1410

Help

Enter and send an order from your trading application to the test server.

The test server is verifying that the order is entered successfully and contains correct information.

refresh ▲

FIG. 14

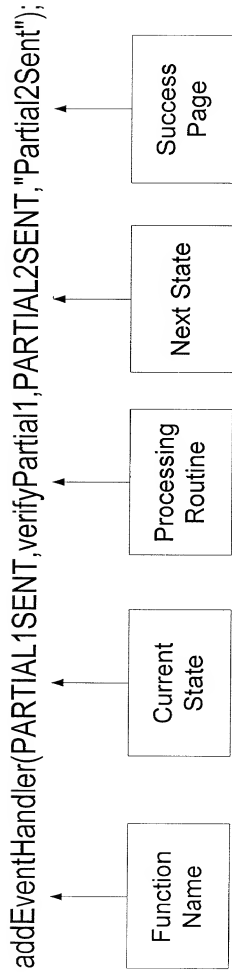


FIG. 15

FO2011-925566

transactools

Order Fill

Steps

Connect to Server
Mark Order
Verify Fill
Test Complete

Verify Order Ack

The test server has sent you an acknowledgement for your order. You should see that your order has been accepted by the test server and is now in a "Working" or "live" State.

Do you see that the order has been accepted?

YES NO

Warnings: (see help at right for more details)

Field 52(SendingTime): Your time (Thu Aug 02 13:42:31 EDT 2001) is more than 1 minute away from the host time (Thu Aug 02 13:41:16 GMT-0400 (EDT) 2001)

Help

The order you sent was accepted and placed by the test server and a confirmation was sent by the test server back to your trading application.

Your trading application should indicate that the order is now in a "Working" or "live" state. If the order was rejected for the reason you sent and the order is now in a "live" state.

NOTE: Some trading applications may have the new order in a "working" state, which is a state that the order has moved from a "pending" to a "live" state. It is important to know that the order is represented only the way you know the order is actually being traded at the broker.

Warnings:

- The sending time on this message is more than 1 minute off. We suspect a clock error on the test server. Please wait for a minute to allow for clock differences, but we encourage you to sync your server's clock to atomic time to minimize this difference.

refresh

1610 1620 1630

FIG. 16

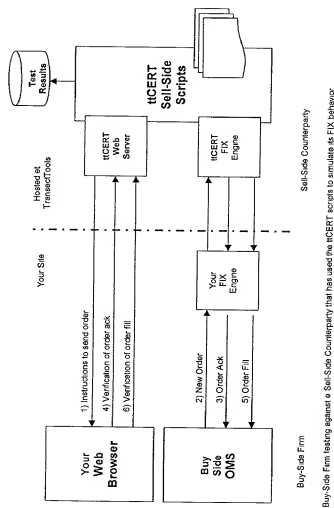
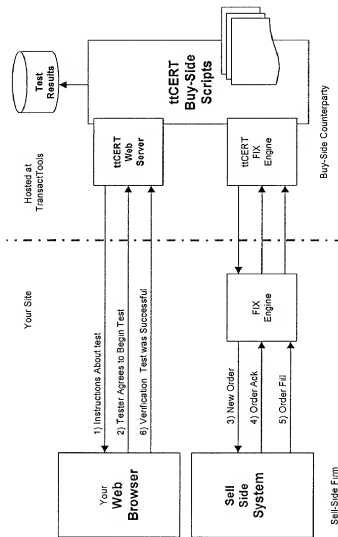


FIG. 17



Sell-Side Firm testing against a Buy-Side Counterparty that has used the ttCERT scripts to simulate its FIX behavior

FIG. 18

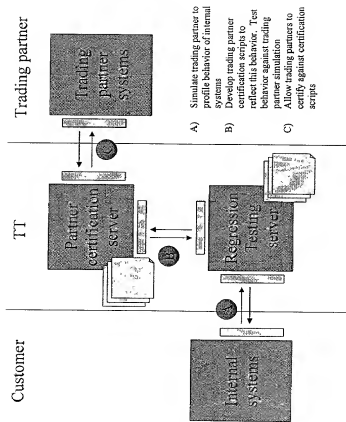
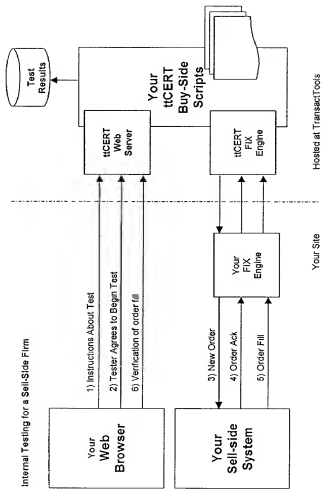
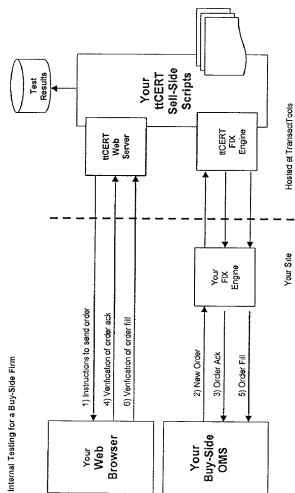


FIG. 19



As a sell-side firm, you write the buy-side scripts that run on the ttCERT server to simulate external buy-side customers

FIG. 20



As a buy-side firm, you write the sell-side scripts that run on the tCERT server to simulate your sell-side customers

FIG. 21

Internal Testing of Automated Scripts – Running Buy-Side Scripts Against Sell-Side Scripts

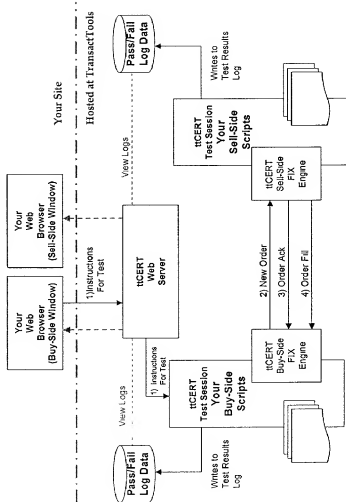


FIG. 22

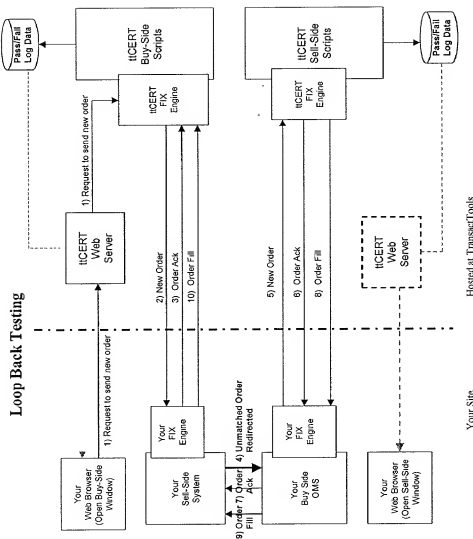


FIG. 23